

## **System and Method for Scheduling A Fabrication Process**

**[52]** What is claimed is:

1. A method for scheduling a fabrication process comprising the activities of:
  - initializing a job set to create a set of on time jobs, a set of late jobs and a set of jobs to be scheduled;
  - selecting a job with a minimum value based on due dates and processing requirements and adding the job to the set of on time jobs;
  - determining if the set of on time jobs will not exceed scheduled due dates; and
  - modifying the set of on time jobs if the set of on time jobs exceeds the scheduled due dates.
2. The method of claim 1, further comprising receiving a set of jobs including processing requirements;
3. The method of claim 1, further comprising calculating the minimum value for selecting the job.
4. The method of claim 1, further comprising calculating a processing time to determine the job to move from the set of on time jobs to the set of late jobs.
5. The method of claim 4, further comprising moving the determined job from the set of on time jobs to the set of late jobs.
6. The method of claim 1, further comprising determining if there are jobs in the set of jobs to be scheduled.
7. The method of claim 1, further comprising selecting a job with a highest order size if the selecting results in a tie.
8. The method of claim 7, further comprising selecting a job with a highest job loading and processing time if the selecting a job with a highest order size results in a tie.

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9. The method of claim 1, further comprising selecting a job with a lowest order size if the modifying results in a tie.
10. The method of claim 9, further comprising selecting a job with a lowest job loading and processing time if the selecting a job with a lowest order size results in a tie.
11. The method of claim 1, wherein the fabrication process includes jobs for fabricating metal works.
12. A machine-readable medium containing instructions for activities comprising:
  - initializing a job set to create a set of on time jobs, a set of late jobs and a set of jobs to be scheduled;
  - selecting a job with a minimum value based on due dates and processing requirements and adding the job to the set of on time jobs;
  - determining if the set of on time jobs will not exceed scheduled due dates; and
  - modifying the set of on time jobs if the set of on time jobs exceeds the scheduled due dates.
13. A device for providing a representation of user screens for an HMI comprising:
  - means for initializing a job set to create a set of on time jobs, a set of late jobs and a set of jobs to be scheduled;
  - means for selecting a job with a minimum value based on due dates and processing requirements and adding the job to the set of on time jobs;
  - means for determining if the set of on time jobs will not exceed scheduled due dates; and
  - means for modifying the set of on time jobs if the set of on time jobs exceeds the scheduled due dates.